Approved for Entry

[DESCRIPTION]

PRINTING SYSTEM WITH A NEGATIVE WORKING THERMAL PLATE FOR ON-PRESS DEVELOPMENT

FIELD OF THE INVENTION

The present invention relates to a printing system for on-press development making use of a negative working thermal plate, which has been made sensitive to infrared radiation.

More specifically the present invention is related to the use of a lithographic printing plate showing an improved chemical resistance and lithographic performance, and, more particularly, a higher run length, a broader lithographic latitude and a better scratch resistance, wherein the effects are related with the use of particular hydrophobic polymer particles in an image-forming layer of the heat sensitive imaging element.

BACKGROUND OF THE INVENTION

Lithographic printing plates making use of polymer binders containing nitrogen atoms have been described in various patent applications, as being particularly suitable for use in order to increase the chemical resistance or print durability.

Toyo Gosei Kogyo KK e.g. in the Japanese patent application JP-A 07-036186 makes use of polymers with heterocyclic ring residues containing nitrogen and copolymers of acrylonitrile-butylacrylate-methyl methacrylate and triallyl isocyanurate. Toyo Gosei makes use of photosensitive vinyl acetate emulsion copolymers in combination with an hydrophilic binder, i.e. polyvinyl alcohol. In this application the photosensitive resin compositions are used for an emulsion screen printing plate.

Kodak Polychrome Graphics GMBH, in the PCT patent application filing WO 99/64930, discloses offset printing plates having a high